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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/781,324	02/13/2001	Yosuke Konaka	1080.1092/JDH	9071

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EXAMINER

PATEL, NITIN C

ART UNIT PAPER NUMBER

2116

DATE MAILED: 10/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

09/781,324

Applicant(s)

KONAKA, YOSUKE

Examiner

Nitin C. Patel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 August 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. This is in responsive to amendment filed on August 16, 2004.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1 – 3, and 25 – 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takizawa et al. [hereinafter as Takizawa], Us Patent 5,739,596, and further in view of Pole, II et al. [hereinafter as Pole], US Patent 6,272,642 B2.

4. As to claims 1 – 3, and 25 – 27, Takizawa discloses an electronic apparatus and method for power delivery with power supply system which includes pluralities of main batteries detachably mounted [main batteries are inserted and removed] comprising: a removal requirement receipt section [14, and 15 detector switch operates and generates an interrupt signal within battery controller when one of battery cover (45, 46) is opened] for receiving a removal requirement for a part of [101, 102 main battery packs] the mounted batteries [101, 102 main battery packs][col. 5, lines 40 – 59, col. 11, lines 17 – 26, fig. 1, 3A, 3C]; a processing ability determination section responsive to the removal requirement for determining whether a supplying possible electric power from the remaining batteries is capable [non-selected battery's charge level is determined that is sufficient] of maintaining a processing ability [col. 14, lines 45 – 47]; and a processing ability control section for controlling the operation of an apparatus

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operative or stop depending upon the charge level is sufficient or not [col. 11, lines 17 – 26, col. 12, lines 24 – 62, col. 14, lines 30 – 60, fig. 5, 8].

However, Takizawa's does not teach about lower the processing ability while keeping the electronic apparatus operative in accordance with a decision from determination section that the electric power needs to lower the processing ability. In summary, Takizawa does not teach different modes of operation with different processing ability depending upon the available charge level determination of un-selected battery.

Pole teaches a system and method for managing system's different performance state, which is adapted to transition from a first performance to a lower activity states [C1, C2, C3] in response to the power management event while keeping the electronic apparatus operative and the power management event is generated in response to a change in system's power source [abstract, col. 1, lines 36 – 45, col. 2, lines 1 – 36, col. 4, lines 24 – 41, col. 6, lines 15 – 60, col. 7, lines 1 - 63].

It would have been an obvious to one of an ordinary skill in art, having the teachings of Takizawa and Pole in front of him at the time of invention was made, to modify the processing ability control section for controlling the operation of an apparatus operative or stop depending upon the charge level is sufficient or not disclosed by Takizawa to include a transition to lower processing ability [lower performance state] in response to determination that low charge level instead of directly stop state which prevent system reset, and the signal VRPWRGD is maintained active during the performance state transition by control logic and system may trigger a performance state change including an over a temperature condition where a predefined temperature threshold in a thermal zone of computer system has been violated , and system usage

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is monitored, with events generated to trigger switching to a lower performance state if usage is low which obviously also lengthen the life of battery [col. 6, lines 15 – 38].

5. As to claims 4 – 6, Takizawa teaches a portion [processor] receiving a clock [internal clock] and operative in synchronism with clock [external clock] while consuming an electronic power according to a repetitive frequency of clock [internal clock frequency settings], wherein processing ability control section changes [changing] over the frequency [frequency settings] of the clock [internal clock] to control the processing ability [col. 4 lines 1 – 61, col. 5, lines 15 – 39, col. 6, lines 1 – 4].

6. As to claims 7 – 8, Takizawa teaches display section for displaying inhibit or acceptance of the removal of battery with corresponding LED on [col. 5, lines 4 – 36, fig. 8].

7. As to claim 9 – 12, and 30 – 33, Takizawa teaches monitoring section for monitoring residual electric power by measuring voltage and current of mounted batteries and determines residual electric power [battery controller monitors by measuring voltage level and current of battery pack][col.7, 37 – 48, col. 13, lines 52 – 67, col. 14, lines 1 - 10].

8. As to claims 13 – 15, Takizawa teaches plurality of main batteries, which are chargeable [rechargeable] batteries and capable of being mounted on an electronic apparatus [col. 5, lines 40 – 45, col. 3, lines 5 – 21, fig. 2, 3A-3C, 4].

9. Claims 16 – 24, and 34 – 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takizawa et al. [hereinafter as Takizawa], Us Patent 5,739,596, and further in view of Pole, II et al. [hereinafter as Pole], US Patent 6,272,642 B2 as applied to claims 1 – 15, and 25 - 33 above, and further in view of Dunstan, US Patent 5,600,230.

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10. As to claims 16 – 24, and 34 – 42, Takizawa discloses an electronic apparatus and method for power delivery with power supply system which includes pluralities of main batteries detachably mounted [main batteries are inserted and removed] comprising: a removal requirement receipt section [14, and 15 detector switch operates and generates an interrupt signal within battery controller when one of battery cover (45, 46) is opened] for receiving a removal requirement for a part of [101, 102 main battery packs] the mounted batteries [101, 102 main battery packs][col. 5, lines 40 – 59, col. 11, lines 17 – 26, fig. 1, 3A, 3C]; a processing ability determination section responsive to the removal requirement for determining whether a supplying possible electric power from the remaining batteries is capable [non-selected battery's charge level is determined that is sufficient] of maintaining a processing ability [col. 14, lines 45 – 47]; and a processing ability control section for controlling the operation of an apparatus operative or stop depending upon the charge level is sufficient or not [col. 11, lines 17 – 26, col. 12, lines 24 – 62, col. 14, lines 30 – 60, fig. 5, 8].

However, Takizawa's does not teach about lower the processing ability while keeping the electronic apparatus operative in accordance with a decision from determination section that the electric power needs to lower the processing ability. In summary, Takizawa does not teach different modes of operation with different processing ability depending upon the available charge level determination of un-selected battery.

Pole teaches a system and method for managing system's different performance state, which is adapted to transition from a first performance to a lower activity states [C1, C2, C3] in response to the power management event while keeping the electronic apparatus operative and the power management event is generated in response to a change in system's power source

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[abstract, col. 1, lines 36 – 45, col. 2, lines 1 – 36, col. 4, lines 24 – 41, col. 6, lines 15 – 60, col. 7, lines 1 - 63].

However, Takizawa and Pole teaches that the battery packs are capable of being mounted on electronic apparatus but non of them discloses that each of battery packs have a memory for storing a residual electric power of a battery of an associated battery pack.

Dunstan teaches a smart battery [82, fig. 4] includes a rechargeable battery [80], micro-controller [56], and memory [60] for storing different charge values [61 – 71 in fig. 4] including monitoring and calculating remaining capacity value by measuring battery's con [col. 8, lines 44 – 67, col. 9, lines 1 – 64, col. 10, lines 38 - 63].

It would have been an obvious to one of an ordinary skill in art, having the teachings of Takizawa, Pole and Dunstan in front of him at the time of invention was made, to modify the processing ability control section for controlling the operation of an apparatus operative or stop depending upon the charge level is sufficient or not and replacing power source not limited to rechargeable alkaline, nickel-cadmium and nickel metal hydride batteries [col. 3, lines 12 – 15] disclosed by Takizawa to include a transition to lower processing ability [lower performance state] in response to determination that low charge level instead of directly stop state which prevent system reset, and the signal VRPWRGD is maintained active during the performance state transition by control logic and system may trigger a performance state change including an over a temperature condition where a predefined temperature threshold in a thermal zone of computer system has been violated , and system usage is monitored, with events generated to trigger switching to a lower performance state if usage is low which obviously also lengthen the life of battery [col. 6, lines 15 – 38]; and to include Dunstan's smart battery with rechargeable

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battery, memory, and controller which calculates and updates remaining capacity value based on battery current, and battery's characteristics and periodically compares capacity alarm value and sends capacity alarm signal when remaining capacity value is less than the alarm value which controls its own charge cycle to optimize charge time, prolong battery life, and prevent destructive charging conditions too [col. 3, lines 58 – 67, col. 4, lines 1 – 17, col. 7, lines 18 – 33].

11. Applicant's arguments with respect to claims 1 - 42 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nitin C. Patel whose telephone number is 703-305-3994. The examiner can normally be reached on 8:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne H. Browne can be reached on 703-308-1159. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nitin C. Patel
September 22, 2004


LYNNE H. BROWNE
SUPERVISORY PATENT EXAMINER
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